DATE: 1/15/13

API#: 47-087-04718

State of West Virginia Department of Environmental Protection Office of Oil and Gas

Well Operator's Report of Well Work

Farm name:Larry D. And Joyce Epling	Oper	ator Well No.	:HR 475_		
LOCATION: Elevation:1020'	Quad	lrangle:	Reedy WV 7.	5'	
District:Reedy	Countr	Ros	ne		
Latitude: 7281'_Feet South of 38Deg	_ comity	in. 00 Se			
Longitude 7634' Feet West of 81 1	Deg. 22 Min	1. 30 Se			
		~_~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
Company:Hard Rock Exploration		_		•	
	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.	
Address: 1244 Martins Branch Road					
Charleston WV, 25312					
Agent: Marc Scholl	13 3/8"	32'	32'	N/A	
Inspector: Ed Gainer	9 5/8"	914'	914'	456 ft3 CTS	
Date Permit Issued: 6/26/12	7"	2621'	2621'	564 ft3 CTS	
Date Well Work Commenced: 9/5/12	4.5"	7560'	7560'	130 ft3	
Date Well Work Completed: 10/5/12		<u></u>		<u> </u>	
Verbal Plugging:			0'MD(kop) - 498		
Date Permission granted on:	On first build section - later plugged back and started new				
Rotary x Cable Rig	Build section	at shallower T	VD.		
Total Depth (feet): 7614'TMD, 4401'TVD		L			
Fresh Water Depth (ft.): None - dry	Ran Gyro Log	g from 3700' -	Surface	RECEIVED	
				of Oil & Gas	
Salt Water Depth (ft.): 1927'				PINCH OF A Cas	
	,			FEB 2 0 2013	
Is coal being mined in area (N/Y)? N				FED 20 2013	
Coal Depths (ft.):N/A			1	l	
OPEN FLOW DATA				WV Department of ronmental Protection	n
Producing formation Lower Huron_Sha	le Pay zone	depth (ft) 4	531'MD- 7614	'MD	
110000000000000000000000000000000000000	<u></u> ,		4362'TVD - 4		
Gas: Initial open flow_ 375 MCF/d Oil: In	itial onen flov			.01 1.2	
Final open flow >1.5 MMCF/d					
Time of open flow between initial and f					
Static rock Pressure 1240 psig (s					
buttle fook freesure12-topoig (6	ai iaco pressai				
Second producing formation	Doy zor	ne depth (ft)			
Gas: Initial open flow MCF/d Oil:	Initial open fl	ow.	Bbl/d		
	inal open flow		Bbl/d		
Time of open flow between initial and f	-	Hou			
<u> </u>			ours		
Static rock Pressurepsig (surface	e pressure) ar	tern	oms		
NOTE: ON BACK OF THIS FORM PUT THE I	OI I OWING:	1) DETAILS	OF PERFORAT	FD	
INTERVALS, FRACTURING OR STIMULATIN					
LOG WHICH IS A SYSTEMATIC DETAILED	GEOLOGICA	L RECORD C	F ALL FORMAT	TIONS,	
INCLUDING COAL ENCOUNTERED BY THE	WELLBORE.			•	
Signed: Ames Total	- 1/2				
By: President					

Formation:	Top:	Bottom:	87.0471
RR/Sand/Shale	0	1875	
Salt Sand	1875	2110	
Big Lime	2110	2160	
Big injun	2160	2180	
Weir	25 1 9	2525	
Coffee Shale	2571	2587	
Devonian Shale	2587	4530 '	
Lower Huron Section	4350	4530'	

All depths shown As TVD

Initial KOP- 3950'MD

Initial Land - 4905'MD, 4530' TVD

Drilled to depth of 7418'MD and had downhole fire - left 60jts DP and BHA in hole.

09/15/12 Call out for Cmt crew to plug back. Start pumping 88 bbls Type 1 2% CaCl (75 bbl at 15 ppg, 13 at 15.6 ppg). Follow cmt with 2 bbl water. Well on suction. TOOH with 20 jts drill pipe back to 2148'. Blow through string with air. Wait on cmt to run Wireline and check top. Cmt top at 3000'

Final KOP 3756'
Final Land – 4780'MD, 4401'TVD
Drilled to depth of 7614'TMD

09/20/12. Run total of 177 jts of 4.5" R-3 11.6ppf N-80 casing to depth of 7560' set at 7566' KB. MIRU Nabors Packer set crew. Pressure test surface lines to 5000 psi. Start pumping 2 bbl water and drop ball for pump out shoe – follow with 2 bbl water and start pumping N2. Pressure up to 3000 psi with approx. 150k scf N2 at 5:50am. Hold pressure for 10 min and continue to pump N2 to pressure up to 4019 psi to open shoe. Pumped total of 198k scf. Finish opening shoe at 6:10am. Dump squeeze with 100 sx cmt mixed at 15ppg. Follow with 2 bbl water.

NOTE: THERE ARE NO PERFORATED INTERVALS IN THIS STYLE OF COMPLETION. THE PACKERS WILL SERVE AS STAGE ISOLATION AND THE BALL ACTIVATED MECHANICAL SLEEVE SERVES AS THE MEANS OF COMMUNICATION FROM WELLBORE TO FORMATION. ALL DEPTHS ARE INDICATED BELOW.

Stage	Sleeve	Sleeve ID	Ball Size	Packer	RECEIVED
1	7559.25	P/O Shoe	N/A	7432.85	Office of Oil & Gas
2	7299.95	1.15	1.250	7212.85	
3	7079.95	1.28	1.375	6992.85	FEB 2 0 2013
4	6859.95	1.40	1.500	6772.85	
5	6639.95	1.53	1.625	6552.85	WV Department of
6	6461.75	1.65	1.750	6332.85	WV Department of Environmental Protection
7	6199.95	1.78	2.000	3071.05	
8	5938.15	2.03	2.250	5851.05	
9	5718.15	2.28	2.500	5631,05	
10	5498.15	2.53	2.750	5411.05	
11	5278.15	2.78	3.000	5191.05	
12	5058.15	3.03	3.250	4971.05	
13	4838.15	3.28	3.500	4751.05	
14	4618.15	3.53	3.750	4531.05	
Anchor				2975.00	

10/05/12 Nabors Stim crew Pressure test lines (MIRU on 10/4/12). Open frac valve at 6:50am – 1226 psi casing pressure. Start pumping at half rate On Stg 1 and bring trucks in slowly. Pump total of 1MM scf N2 at 100k scf/min. Shut down and drop 1.25" ball for Stg 2 off of gate. Start pumping at 17k scf/min; Open sleeve and Bring to design rate of 100kscf/min and pump total of 1MM scf N2. Shut down and drop 1.375"ball for Stg 3 and repeat process for Stgs 3 – Stg 14.

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7
Max P	5085	5050	5538	5634	5634	5683	5890
Avg P	4739	4781	5349	5567	5567	5580	5833
Max R	104	102	103	105	105	106	99
Avg R	98	99	101	101	103	101	97
Shut in	1705-10	1682-10	N/A	N/A	N/A	N/A	N/A
	Stage 8	Stage 9	Stage 10	Stage 11	Stage 12	Stage 13	Stage 14
Max P	4762	4550	4593	4616	4793	5120	4718
Avg P	4620	4470	4563	4537	4735	5074	4673
Max R	103	103	102	101	103	102	102
	¥				400	404	101
Avg R	100	100	101	100	102	101	101

RECEIVED
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WV Department of Environmental Protection